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September 12, 1994

HAND-DELIVERED

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Re: Plan of UTAM, Inc. for Refinancing and
Managing the 2 GHZ Microwave Relocation;
GEN Doc. No. 90-314 RM Nos. 7140, 7175 and 7618

Dear Mr. Secretary:

Transmitted herewith for filing on behalf of the Association of American Railroads ("AAR"), in response to the Commission's Public Notice, DA 94-873, released August 11, 1994, are an original and four copies of the Comments of AAR on the plan of UTAM, Inc. regarding the proposed financing and management of the 2 GHz microwave relocation filed by UTAM on August 1, 1994.

Any questions concerning this matter should be directed to the undersigned.

Respectfully submitted,



Thomas J. Keller
Michael S. Wroblewski

ATTORNEYS FOR THE ASSOCIATION
OF AMERICAN RAILROADS

Enclosure

cc: See Certificate of Service

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
Amendment of the Commission's) GEN Docket No. 90-314
Rules to Establish New)
Personal Communications) RM-7140, RM-7175, RM-7618
Services)

To: The Commission

**COMMENTS OF THE ASSOCIATION OF AMERICAN
RAILROADS ON UTAM PLAN FOR FINANCING AND
MANAGING 2 GHZ MICROWAVE RELOCATION**

The Association of American Railroads ("AAR"), by its undersigned counsel, hereby files its comments on the plan of UTAM, Inc. ("UTAM") regarding financing and managing the 2 GHz microwave reallocation (the "Plan"), in response to the Commission's Public Notice, DA 94-873, released August 11, 1994.

I. Background of Proceeding and Interest of AAR

In the Second Report and Order establishing regulations for unlicensed Personal Communications Service ("PCS") in Part 15 of its regulations, the Commission designated UTAM as the coordinator for the transition of the spectrum from fixed microwave service to unlicensed PCS.^{1/} The frequency band established for unlicensed PCS is 1910-1930 MHz. See 47 C.F.R. Section 15.301. UTAM would be responsible for administering the transition, negotiating cost of relocation, ensuring that

^{1/} See, Second Report and Order, GEN Docket No. 90-314, 8 FCC Rcd 7700 (1993).

comparable facilities are provided for fixed microwave users, and resolving disputes of interference to fixed microwave operations from unlicensed PCS stations. Any unlicensed PCS device or system must be coordinated through UTAM before being initially deployed or subsequently relocated. All applicants for FCC equipment authorization of unlicensed PCS devices will be required to be participants in UTAM.

The role of UTAM as described above was conditioned on UTAM's submission and the Commission's approval of: (1) a funding plan involving all prospective manufacturers of unlicensed devices; and (2) a plan for band clearing that will permit prompt implementation of "nomadic" unlicensed PCS devices. On August 1, 1994, UTAM filed its plans for financing and managing the relocation of fixed microwave stations.

AAR is a membership organization of North America railroads. The AAR represents its member railroads on federal regulatory matters, and serves as the railroads' frequency coordinator for FCC licensing and frequency coordination purposes.

The U.S. railroad industry makes extensive use of fixed point-to-point microwave facilities to monitor and control more than 1.2 million freight cars on more than 215,000 miles of track throughout the nation. Microwave systems, for example, automatically transmit signals and remotely control switching of tracks necessary for the safe routing of trains through depots and freight yards. These systems also relay critical telemetry

data from trackside defect detectors located throughout the rail network -- information about damaged rails and overheated or loose train axles is automatically transmitted from these detectors to system personnel who are then able to react in a timely fashion to ensure safe rail operations. Microwave systems also are vital to the coordination of operations between and among the nations railroads. Such coordination is essential in light of the various procedures for sharing equipment and rights-of-way that are typical in the U.S. railroad industry.

AAR's paramount concern with respect to the UTAM Plan is to ensure that deployment of unlicensed PCS devices does not threaten the safety and reliability of the fixed microwave operations which support the nation's rail transportation system. Having participated as an Associate Member in UTAM in the discussions leading up to the Plan, and having reviewed the Plan as filed by UTAM with the Commission, AAR submits the following comments regarding certain aspects of the plan:

II. Deployment of Non-Coordinatable Devices

UTAM states that it is "investigating" options to allow non-coordinatable deployment prior to full clearing of all of the unlicensed spectrum, and that UTAM "hopes" to facilitate this process "through the use of guard bands, which are currently being investigated." Plan at 55. In this regard, UTAM states further that: "Any such deployment of non-coordinatable devices prior to total band clearing will be consistent with FCC rules

and UTAM's obligation to prevent interference to microwave links."

AAR interprets the last-quoted sentence to mean that, because the Commission's Rules do not now contemplate the deployment of non-coordinatable devices prior to band clearing, UTAM will either obtain amendment of the rules in the future or specific FCC approval prior to implementing any procedure or program for deploying such devices prior to total band clearing, and that all parties, including the incumbent fixed microwave user community, will have an opportunity to review and comment upon any such proposal.

III. Scope Of Reimbursable Cost

UTAM states that unlicensed PCS providers intending to use the vacated frequency must pay "all costs" associated with the relocation. Plan at 14. The quoted language is consisted with the intent of the Commission as set forth in the Third Report and Order, 8 FCC Rcd 6589, 6608 (1993).^{2/} But at page 26, UTAM uses a different formulation, stating that UTAM "must pay microwave licensees the direct costs associated with providing comparable alternative facilities in order to relocate the microwave links

2/ The Commission stated in the Third Report and Order that "the rules require emerging technology licensees to pay all costs associated with an involuntary relocation. This includes the cost of removing existing facilities, as well as other types of costs that may be involved in relocation." 8 FCC Rcd 6589, 6607-6608.

currently operating in the unlicensed band.^{3/} (emphasis added). UTAM does not explain what it means by "direct" costs, but, in any event, it appears that the Commission did not intend to limit reimbursable expenses in this manner. Unlicensed PCS providers through UTAM, should be required to pay, as the Commission set forth in the Third Report and Order, "all costs" associated with the relocation. Specifically, these microwave incumbents should be compensated for additional test equipment, training, spares, and the costs of personnel involved in negotiating and monitoring the relocation. At page 27, UTAM lists some of the items included in the relocation costs, including negotiations, frequency coordination, engineering design, filing fees, preparation of application, other zoning permits, costs of new equipment at 4-6 GHz; tower modifications, antennas, feedlines, miscellaneous; and installation and validation. To these should be added the costs of training, test equipment, spares and negotiating time, described above.

IV. Need For Coordination Between Licensed PCS And Unlicensed PCS Operators

The UTAM Plan acknowledges that UTAM and the licensed PCS providers will both be clearing frequencies in the spectrum at 1900-1910 MHz and 1930-1940 MHz, which are the bands adjacent to the unlicensed PCS allocation. UTAM also acknowledges that, with respect to fixed microwave channels operating on frequencies that

^{3/} UTAM Plan at 26, emphasis added, footnote omitted.

are within the unlicensed spectrum allocation (1910-1930 MHz), each of the links in the unlicensed band is paired with a link in the licensed band. Plan at 28. With respect to the adjacent bands, UTAM has budgeted a reserve to enable it to clear 10% of those systems "if the need arises." Plan at 29. It is not clear, however, why UTAM chose a 10% factor as opposed to a higher one. Nor is it clear how UTAM intends to coordinate the task of adjacent band clearing with licensed PCS operators. Fixed microwave incumbent operators should not be required to negotiate with two separate parties to clear a single frequency. Furthermore, they should not be required to deal sequentially with a licensed PCS operator and UTAM with respect to clearing a single hop consisting of one channel pair in the licensed PCS band and another channel pair in the unlicensed band. The Commission should require UTAM and the licensed PCS operators to coordinate their activities in the band clearing process so that replacement of fixed microwave links is done in such a manner as to keep intact key segments of a microwave network. By doing so, this will eliminate the inherent problems of maintenance, sparing, reliability, and training that exist when a microwave network is randomly broken up into various frequencies and brands of equipment.

V. Site Coordination Procedures

UTAM states that the "Zone 2" areas, to be determined, will be those where unlicensed PCS devices can be deployed only where

specific site coordination shows that no interference will be caused to incumbent fixed microwave receivers. Plan at 63-64. In this regard, UTAM states that the site coordination procedures for unlicensed PCS will be adjusted to accommodate certain unique needs of unlicensed PCS, including: (1) that unlicensed PCS usage will be heavily concentrated within the typical business day instead of round-the-clock; and (2) that unlicensed PCS will be used predominately within buildings, rather than in outside locations. Plan at 64. The guidelines in TIA bulletin 10-F, according to UTAM, will be used to establish the interference calculation methodology for unlicensed PCS, and are expected to incorporate these factors. AAR is concerned that the two above-mentioned factors, i.e., business-day utilization and in-building use, may not reflect accurately the entire universe of unlicensed PCS utilization. For example, it is likely that some very heavy users of PCS, such as telemarketing entities, would use the facilities much more heavily in the evening hours than in the daytime; and that many users in office buildings may be activating equipment adjacent to windows rather than interior offices. Each of these phenomena would invalidate the two criteria described above, which UTAM intends incorporate in its coordination guidelines.

VI. Interference Resolution

UTAM states that, despite its efforts to prevent instances of interference, "there may be occasions when an incumbent

microwave user will experience interference" for which unlicensed PCS may be the cause. Plan at 67. UTAM's acknowledgment of the prospect of interference to fixed microwave users from unlicensed PCS operators is a source of grave concern to AAR, and presumably to other fixed microwave users. Given the critical nature of the types of communications carried on microwave links operated by railroads, electric utilities and pipeline companies, including telemetry for system operation and control, the effects of interference are potentially very serious. It is for this reason that AAR does not believe that deployment of unlicensed PCS devices prior to band clearing is desirable or appropriate. Nevertheless, if the Commission intends to allow such deployment in order to provide "seed money" for band clearing, it should require, at the very least, that UTAM set forth in advance a clear, detailed and workable process that will result in the prompt resolution of cases of suspected interference. In its present state, the UTAM Plan merely states an intention to establish such a process in the future. Plan at 67. At the very least, such a process ought to include access by fixed microwave incumbents to the UTAM database of unlicensed PCS deployments.

VII. Conclusion

In conclusion, AAR urges the Commission not to approve the UTAM Plan unless and until changes are made, as described above, to address the legitimate concerns of incumbent fixed microwave users and to protect them from interference from unlicensed PCS

devices which may result from deployment of such devices prior to band clearing.

Respectfully submitted,

ASSOCIATION OF AMERICAN RAILROADS

A handwritten signature in dark ink, appearing to read "Thomas J. Keller", is written over a horizontal line.

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September 12, 1994

CERTIFICATE OF SERVICE

I, Deirdre A. Johnson, hereby certify that on this 12th day of September, 1994, copies of the foregoing "Comments of the Association of American Railroads on UTAM's Plan for Financing and Managing 2 GHz Microwave Relocation" were served by first-class mail, postage prepaid to the following parties:

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